# Hui Che's Notebook

## 07/11/16

Work finished:

1. Analyze static double-steady state in the theory of gene toggle switch.
2. Read literature about gene toggle switch, Shine-Dalgarno gene sequence, 5'-UTR, hammerhead ribozyme and the working theory of insulator.
3. Learn html language.

Problem unsolved:

1. Analyze dynamic steady state in the theory of gene toggle switch and curve-analysis.

## 07/12/16

Work finished:

1. Clear up the progress of each group in 7.11.
2. Look up wikis last year, clear up the structure.
3. Learn html language.
4. Read gene transcription of circuit model, from the initial model to insulation, which is helpful to reading literature later; and read the gene circuit model to analyze and understand more about increase and reduction of particle.

Problem unsolved:

1. Difficult to understand the array arithmetic switch theory in gene switch model.
2. The style of articles in our wiki haven't be sure, need to scan and sum up more.
3. Accelerate the learning of html for altering wiki later.

## 07/13/16

Work finished:

1. Clear up the progress of each group in 7.12.
2. Clear up the structure of our wiki.
3. Learn html language.
4. Learn gene circuit example, which is about the promoter pTAC induced by IPTG controlling expression of GFP, know something about the basement of gene circuit.
5. Read the second part of gene circuit, realize the transformation process through mathematic.

Problem unsolved:

1. The image of reactant and product changing curve depending on time in gene circuit model should be drawed.

## 07/14/16

Work finished:

1. Read the second and third part of gene toggle switch, understand the Runge-Kutta method and its image.
2. Read the working theory of insulation.
3. Clear up the progress of each group in 7.13.

Problem unsolved:

1. The simulation of curve parameters and the position of domain via MATLAB exists some problems.

## 07/15/16

**NOTEBOOK**

Work finished:
1. Read the measurement of input in gene circuit.
2. Read the third part of gene model, understand the construction of chemical master equation.
3. Clear up the progress of each group in 7.14, learn Photoshop.

Problem unsolved:
1. Read the project of SYSU this two years and contrast with the arithmetic we learned nowadays.

## 07/16/16

Work finished:
1. Think each part of wiki, make pictures using Photoshop for 'notebook'.
2. Find the question of safety from the official website and other teams.
3. Clear up the progress of each group in 7.15.
4. Clear up the calendar of iGEM.

Problem unsolved:
1. Simplify and determine 'safety' in wiki.

## 07/18/16

Work finished:
1. Learn 2014、2015 SYSU project model.
2. Scan wiki, look up content and design style.
3. Clear up meeting documents.

Problem unsolved:
1. Simplify the content of meeting document.
2. Clear up standardizing data.

## 07/19/16

Work finished:
1. Simplify the meeting documents.
2. Clear up Attribution.
3. Clear up and read the second model.

Problem unsolved:
1. Clear up and read the third model.
2. Understand deeply the model content.

## 07/20/16

Work finished:
1. Integrate one-week documentation of team members.
2. Clear up Attribution.
3. Clear up and read the second model.

Problem unsolved:
1. Translate the one-week documentation.
2. Understand deeply the model content.

## NOTEBOOK

## 07/21/16

Work finished:

1. Integrate one-week documentation of team members.
2. Learn Photoshop.
3. Clear up the improvement of every group on July 20.

Problem unsolved:

1. Translate the one-week documentation.
2. Understand deeply the model content.

## 07/22/16

Work finished:

1. Integrate one-week documentation of team members.
2. Clear up formula and data in 4st model.
3. Learn HTML.
4. Clear up the improvement of every group on July 21.

Problem unsolved:

1. Understand the corresponding formula in model.

## 07/23/16

Work finished:

1. Integrate one-week documentation of team members.
2. Clear up formula and data in 5st model.
3. Adjust the color of wiki home page.
4. Clear up the improvement of every group on July 22.

Problem unsolved:

1. Design wiki image.

## 07/25/16

Work finished:

1. Clear up notebook of team members in a week.
2. Understand the formulas and adjust process in 6st and 7st model.
3. Learn HTML.
4. Look up SBOL brick.

Problem unsolved:

1. There are problems in understanding SBOL.
2. Grasp the SBOL brick.

## 07/26/16

Work finished:

1. Clear up notebook of team members in a week.
2. Learn how to program in SBOL model.
3. Know something about RDF/Xml.

Problem unsolved:

1. Clear up SBOL program model.

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## 07/27/16

Work finished:

1. Clear up notebook of team members in a week.
2. Clear up SBOL model definition.
3. Clear up document content.

Problem unsolved:

1. Understand 7.7 SBOL content.

## 07/28/16

Work finished:

1. Clear up notebook of team members in a week.
2. Understand SBOL with RDF/Xml.
3. Clear up document content.

Problem unsolved:

1. Search some knowledge to understand SBOL better.

## 07/29/16

Work finished:

1. Clear up notebook of team members in a week.
2. Make PPT and share something about SBOL.
3. Read the FSP algorithm.

Problem unsolved:

1. Expand array in FSP algorithm.

## 08/01/16

Work finished:

1. Understand FSP algorithm.
2. Construct state selective model.

Problem unsolved:

1. Find complete limitation condition.

## 08/02/16

Work finished:

1. Clear up groups' work.
2. Find how to construct representative state using FSP algorithm.
3. Clear up propensity function formulas.
4. Cut the audio.

Problem unsolved:

1. Consider the total number of molecules and time limitation during the expansion of states.
2. Clear up complete process of one reaction.

## 08/03/16

Work finished:

1. Clear up everyday summary.
2. Clear up the model in supplemental material and relevant parameters.

## NOTEBOOK

3. Translate Notebook.

Problem unsolved:
1. Translate the generation documentation of Bio2048.
2. SBOL documentation of Bio101.

## 08/04/16

Work finished:
1. Clear up everyday summary.
2. Translate Notebook.
3. Translate development guide of Bio2048.
4. Look up the model in SBOL, try to write SBOL for Bio101.

Problem unsolved:
1. Clear up the modules content in SBOL.